

**PATENT APPLICATION**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q83534

Andrew Lennard LEWIS, et al.

Appln. No.: 10/506,805

Group Art Unit: 1609

Confirmation No.: 5416

Examiner: Kyle A. PURDY

Filed: January 19, 2005

For: DRUG CARRIERS COMPRISING AMPHIPHILIC BLOCK COPOLYMERS

**RESPONSE TO RESTRICTION AND ELECTION OF SPECIES REQUIREMENTS**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is in response to the Restriction and Election of Species Requirement, dated July 31, 2007.

In response to the Restriction Requirement, Applicants elect Group I, Claims 1-28 and 37-44 for examination, with traverse.

Applicants respectfully submit that the Restriction Requirement between Groups I and II is improper, in that Claim 1 of Group I and Claim 29 of Group II have the same special technical features. Namely, that the copolymer comprises a hydrophilic block and a hydrophobic block, and further that there is a biologically active compound associated with the polymer. These features, particularly the fact that the polymer is a block copolymer, distinguish the invention from WO 9301221 which describes statistical copolymers in which all of the monomers are polymerized together. There is no disclosure of block copolymers in which hydrophilic monomers are polymerized to form a block and hydrophobic monomers are polymerized to form

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a block. Thus, Applicants submit that the claimed invention is distinguishable over the disclosure of WO '221.

In addition, the Examiner has required Applicants to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted.

In response, Applicants elect the following species.

For the hydrophilic block of polymer, Applicants elect a block formed by radical polymerization of a zwitterionic monomer which is an ethylenically unsaturated compound of general formula I, YBX, in which Y is  $\text{H}_2\text{C}=\text{C}(\text{CH}_3)\text{-CO-O-}$ , B is  $\text{-CH}_2\text{CH}_2\text{-}$  and X is a group of general formula II in which  $\text{A}^3$  is  $\text{-O-}$ ,  $\text{A}^4$  is  $\text{-O-}$  and  $\text{W}^+$  is a group of formula  $\text{W}^1\text{N}^+\text{R}^3_3$ , in which each group  $\text{R}^3$  is methyl and  $\text{W}^1$  is  $\text{-CH}_2\text{CH}_2\text{-}$ .

For the biologically active molecule, Applicants elect doxorubicin.

For the hydrophobic block, Applicants elect a block formed from ethylenically unsaturated monomers including a compound of formula VII, in which  $\text{Y}^1$  is  $\text{H}^2\text{C}=\text{C}(\text{CH}_3)\text{-CO-O-}$ ,  $\text{B}^1$  is  $\text{-CH}_2\text{CH}_2\text{-}$  and Q is a group of the formula  $\text{-NR}^{17}_p$ , in which p is 2 and each group  $\text{R}^{17}$  is isopropyl.

The claims that read on the elected species are 1-16, 20-25, 27, 28, 38, and 42-44.


Applicants reserve the right to file a Divisional Application directed to non-elected Claims 29-35 and 45-56.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: August 31, 2007